

More New Brachypterous Species of the Group of *Platydomene nobilis* (Coleoptera, Staphylinidae) from Northeastern Honshu, Japan

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Abstract Three new staphylinid species of the group of *Platydomene nobilis* are described under the names *P. daibosatsuensis*, *P. flavipes* and *P. iidesana*. They are found in the leaf litter accumulated in deciduous broadleaved forests on mountain areas of eastern Honshu, Japan.

As a continuation from the previous paper (WATANABE, 2008), I am going to describe three new species of the group of *Platydomene nobilis* in the present paper. They were found in the leaf litter accumulated in deciduous broadleaved forests on mountain areas of eastern Honshu, Japan. One of these seems to be placed near *P. nobilis* (SAWADA) in having similar configuration of male genital organ. After a close examination, however, it has become clear that it is new to science on account of difference in external feature and configuration of the fused paramere of male genital organ. The remaining two species are readily distinguishable from the previously known species of the *nobilis* group by remarkably different configuration of the male genital organ.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to the late Messrs. Kôichi SASAKI, Sapporo-shi, and Keijirô TAKAHASHI, Tokyo, for their kind help through the cooperative work on the Iide Mts., and Mr. Junnosuke KANTOH, Laboratory of Entomology, Tokyo University of Agriculture, for taking the photograph inserted in this paper.

Platydomene daibosatsuensis Y. WATANABE, sp. nov.

[Japanese name: Daibosatsu-dôgane-nagahanekakushi]

(Figs. 1–4)

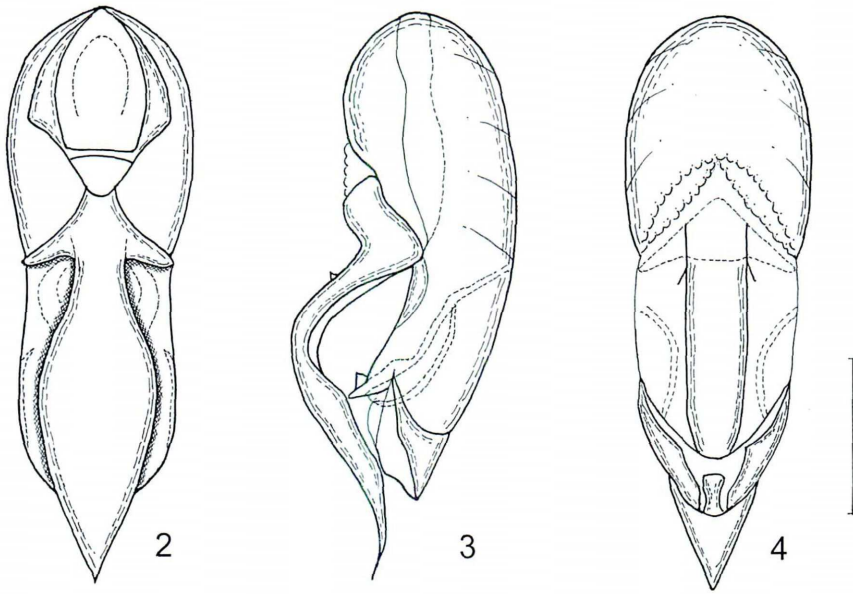
Body length: 7.6–8.3 mm (front margin of the head to anal end); 4.2–4.4 mm (from front margin of head to elytral apices).

Body elongate, parallel-sided and somewhat depressed above. Colour brownish black and moderately shining, with mouth parts, antennae and legs reddish brown, and elytra with somewhat bronzy reflection.



Fig. 1. *Platydomea daibosatsuensis* sp. nov., ♂, from Mt. Daibosatsu, Yamanashi Pref., Japan.
Scale: 1.0 mm.

Male. Head suborbicular and elevated medially, as long as wide, widest at the middle and slightly more strongly narrowed posteriad than anteriorly; lateral sides gently arcuate and about 2.5 times as long as the longitudinal diameter of each eye which is slightly prominent laterad; frontal area between antennal tubercles flattened and glabrous, bearing a remarkable setiferous puncture on each side; surface densely and coarsely punctured, the punctures becoming much closer and finer in latero-basal parts. Antennae moderately long, extending a little beyond the middle of pronotum and not thickened apicad, with basal segment polished, 2nd and 3rd subopaque, the remainings opaque, 1st segment robust and dilated apicad, twice as long as wide, 2nd more than 1.5 times as long as wide, but remarkably shorter ($2\text{nd}/1\text{st}=0.71$) and somewhat narrower ($2\text{nd}/1\text{st}=0.86$) than 1st, 3rd equal to 2nd in both length and width, 4th a little longer than wide ($\text{length}/\text{width}=1.33$), somewhat shorter ($4\text{th}/3\text{rd}=0.80$) than though equal in width to 3rd, 5th to 10th more or less moniliform and equal in both length and width to one another, each a little longer than wide ($\text{length}/\text{width}=1.16$), somewhat shorter (each of 5th to 10th / 4th = 0.88) than though equal in width to 4th, 11th fusiform, more than 1.5 times as long as wide, distinctly longer ($11\text{th}/10\text{th}=1.43$) than though equal in



Figs. 2-4. Male genital organ of *Platydomene daibosatsuensis* sp. nov.; dorsal view (2), lateral view (3), and ventral view (4). Scale: 0.5 mm.

width to 10th, subacuminate at the apex.

Pronotum gently elevated medially, remarkably longer than wide (length/width = 1.22), evidently longer (pronotum/head = 1.17) but slightly narrower than head (pronotum/head = 0.96), widest at anterior third and slightly more strongly narrowed posteriad than anterior; lateral sides nearly straight except near anterior and posterior angles as seen from dorsal side, anterior margin arcuate though truncate or slightly emarginate at the middle, posterior margin subtruncate, anterior angles obtuse and not visible from above, posterior ones rounded; surface densely and coarsely punctured, the punctures becoming closer and finer in lateral parts as in head, provided with a median longitudinal smooth space, which is sometimes indistinct in posterior half. Scutellum subtriangular and somewhat convex, surface uneven and provided with a few minute setiferous punctures. Elytra subquadrate and more or less depressed above, slightly dilated posteriad, a little longer than wide (length/width = 1.08), somewhat shorter (elytra/pronotum = 0.93) but slightly wider (elytra/pronotum = 1.04) than pronotum; lateral sides slightly arcuate, posterior margin emarginate at the middle, posterior angles broadly rounded; surface densely and roughly punctured; epipleuron provided with a longitudinal carina inside the outer margin. Hind wings reduced, three-quarters as long as elytra. Legs moderately long and similar in structure to those of the other members of this species-group.

Abdomen elongate, gradually dilated towards 7th segment, and then abruptly narrowed apicad, 3rd to 7th tergites each shallowly and transversely depressed along the base, closely covered with fine punctures and fine brownish pubescence, 8th tergite

somewhat more sparingly punctured than in the preceding tergites; 8th sternite subtriangularly excised at the middle of posterior margin, provided with a deep spindle-shaped depression in front of the excision, bottom of the depression asperate; 7th sternite broadly and shallowly emarginate at the middle of posterior margin, bearing a shallow and horseshoe-shaped depression before the emargination; 6th sternite slightly flattened at the middle just before posterior margin; 5th sternite simple.

Genital organ spindle-shaped and symmetrical. Median lobe elliptical and distinctly wider than fused paramere, slightly narrowed towards the rounded apex as seen from ventral side. Fused paramere considerably extending beyond median lobe, widest at the middle and somewhat more strongly narrowed apicad than basad, the apex acutely pointed as seen from dorsal side, suddenly curved ventrad near the middle and provided with a minute subtriangular projection on basal fourth in profile.

Female. Similar in general appearance to the male though the 8th abdominal sternite narrowed towards the broadly rounded apex, 7th and 6th sternites each not modified.

Type series. Holotype: ♂, allotype: ♀, Mt. Daibosatsu, Yamanashi Pref., Honshu, Japan, 25-V-1980, Y. WATANABE leg. Paratypes: 6 ♂♂, 4 ♀♀, same data as for the holotype.

Distribution. Japan (central Honshu).

Remarks. The present new species is closely similar in facies as well as in configuration of male genital organ to *P. nobilis* (SAWADA, 1965), but different from it in the following points: Head slightly broader than pronotum, surface slightly more coarsely punctured on medio-frontal area, pronotum less strongly narrowed posteriad; lateral sides slightly more strongly arcuate; 8th abdominal sternite of the male provided with a spindly depression in front of the subtriangular excision at the middle of posterior margin, bottom of the depression asperate all over; 7th sternite broadly and feebly emarginate at the middle of posterior margin and provided with a weak horseshoe-shaped depression before the emargination, 6th sternite more weakly depressed than in 7th sternite at the middle just in front of posterior margin; genital organ with median lobe longer and wider, fused paramere more strongly dilated at the median part.

Bionomics. All the type specimens were obtained by sifting dead leaves accumulated in deciduous broadleaved forest at an altitude of about 1,600 m.

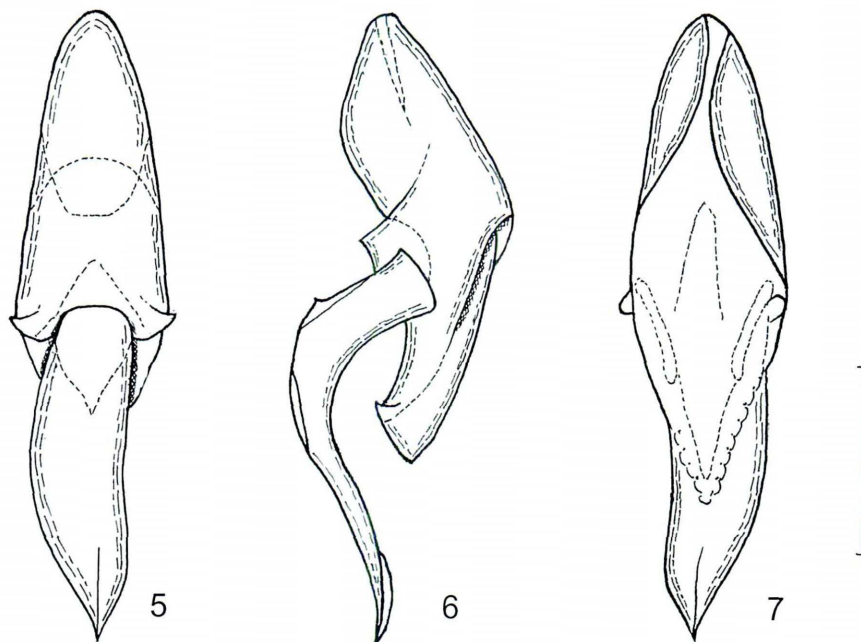
Etymology. The specific epithet of this new species is derived from the type locality "Mt. Daibosatsu".

Platydomene flavipes Y. WATANABE, sp. nov.

[Japanese name: Kiashi-dôgane-nagahanekakushi]

(Figs. 5-7)

Body length: 7.4-8.1 mm (from front margin of head to anal end); 4.3-4.5 mm (from front margin of head to elytral apices)



Figs. 5-7. Male genital organ of *Platydomene flavipes* sp. nov.; dorsal view (5), lateral view (6), and ventral view (7). Scale: 0.5 mm.

Body elongate, parallel-sided and subdepressed above. Colour brownish black and moderately shining, with mouth parts and antennae brownish red, abdomen reddish brown, posterior half of elytra and legs yellow, elytra with feeble bronzy reflexion.

Similar in general appearance to the preceding species, but easily distinguishable from it in antennal articulation, colour of elytra and configuration of male genital organ.

Male. Head suborbicular and as long as wide as in the preceding species, though less elevated medially and more strongly narrowed posteriad in posterior half than in the preceding species; lateral sides gently arcuate and 2.5 times as long as the longitudinal diameter of each eye which is somewhat prominent laterad; surface densely though less coarsely punctured than in the preceding species, the punctures becoming much denser and finer in latero-basal parts as in the preceding species. Antennae longer than those of the preceding species, extending to near the posterior margin of pronotum, 4th to 10th not moniliform, basal segment polished, 2nd and 3rd subopaque, the remainings opaque, 1st segment robust and dilated apicad, twice as long as wide, 2nd to 11th equal in width to one another, 2nd clearly longer than wide ($\text{length}/\text{width} = 1.67$), considerably shorter ($2\text{nd}/1\text{st} = 0.63$) and narrower ($2\text{nd}/1\text{st} = 0.75$) than 1st, 3rd twice as long as wide, a little longer ($3\text{rd}/2\text{nd} = 1.20$) than 2nd, 4th to 7th equal in length to one another, each evidently longer than wide ($\text{length}/\text{width} = 1.67$) though somewhat shorter (each of 4th to 7th / 3rd = 0.83) than 3rd, 8th 1.5 times as long as wide, slightly shorter than 7th ($8\text{th}/7\text{th} = 0.90$), 9th and 10th equal in length to each other, 11th fusiform, twice as long

as wide and 1.5 times as long as 10th, subacuminate at the apex.

Pronotum similar in configuration to that of the preceding species though slightly longer (length/width=1.28) than that of the preceding species, a little longer (pronotum/head=1.23) but slightly narrower (pronotum/head=0.96) than head; surface densely and slightly more coarsely punctured than in the preceding species, the punctures becoming closer and finer in lateral parts as in the preceding species except for a narrow median smooth space through the length of pronotum. Scutellum similar in structure to that of the preceding species. Elytra subtrapezoidal and slightly dilated apicad, slightly longer than wide (length/width=1.04), a little shorter (elytra/pronotum=0.88) but somewhat wider (elytra/pronotum=1.08) than pronotum; lateral sides almost straight, posterior margin more strongly emarginate at the middle than in the preceding species; surface densely and much more coarsely punctured than in the preceding species. Hind wings reduced to small lobes which are as long as elytra. Legs similar in structure to those of the preceding species.

Abdomen gradually narrowed towards 7th segment and then abruptly narrowed apicad as in the preceding species; each tergite densely and slightly coarsely punctured than in the preceding species; 8th sternite somewhat more broadly and deeply excised at the middle of posterior margin than in the preceding species, and the spindle depression before the exision larger than that of the preceding species, bottom of the depression more sparingly asperate than in the preceding species; 7th sternite broadly and shallowly emarginate at the middle of posterior margin and slightly depressed in front of the emargination; 6th sternite simple.

Genital organ elongate and considerably different from those of the previously known species of this species-group. Median lobe spindle-shaped, slightly wider than fused paramere, widest at the middle, distinctly narrowed basad and apicad. Fused paramere asymmetrical and extending beyond the apex of median lobe, nearly parallel-sided in basal two-thirds, and abruptly narrowed towards the acutely pointed apex, dorsal surface provided with a fine longitudinal carina in apical fourth, suddenly curved ventrad at basal third and provided with a minute spine at basal fourth in profile.

Female. Similar in facies to male, but the 8th abdominal sternite narrowed towards the apex which is subtruncate; 7th sternite simple.

Type series. Holotype: ♂, allotype: ♀, Nukumidaira on the Iide Mts., Yamagata Pref., Honshu, Japan, 28-VII-1964, Y. WATANABE leg. Paratypes: 5 ♂♂, 9 ♀♀, same data as for the holotype; 3 ♂♂, same locality and date as above, K. SASAKI leg.; 1 ♂, same locality and date as above, K. TAKAHASHI leg.; 3 ♂♂, 3 ♀♀, Ishikorobizawa on the Iide Mts., Yamagata Pref., Honshu, Japan, 27-VII-1964, Y. WATANABE leg.; 1 ♀, same locality and date as above, K. SASAKI leg.

Distribution. Japan (northeastern Honshu).

Bionomics. All the type specimens were obtained by sifting dead leaves accumulated in deciduous broadleaved forests of two different localities, Nukumidaira (550 m alt.) and Ishikorobizawa (1,300 m alt.).

Etymology. The specific epithet of this new species is given after its yellow legs.

Platydomene iidesana Y. WATANABE, sp. nov.

[Japanese name: Iide-dôgane-nagahanekakushi]

(Figs. 8–10)

Body length: 6.4–6.6 mm (from front margin of head to anal end); 3.3–3.4 mm (from front margin of head to elytral apices).

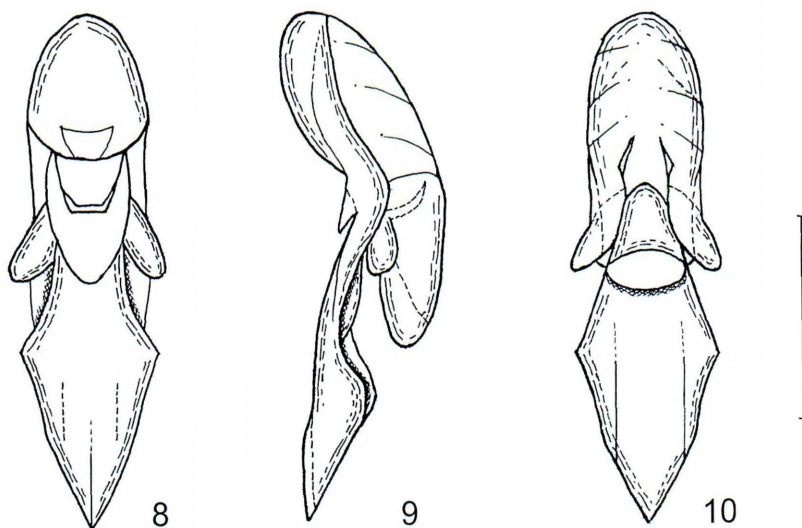
Body elongate, parallel-sided and subdepressed above. Colour blackish brown to brownish red and moderately shining, with mouth parts, antennae and legs dark yellow.

Male. Readily distinguishable from the previously known species by narrow body, elytra strongly punctured, different secondary sexual character of 8th abdominal sternite and configuration of genital organ in the male.

Head subquadrate and gently elevated medially, slightly transverse (width/length = 1.06), widest at posterior third and slightly more strongly narrowed anteriorly; lateral sides feebly arcuate and 2.5 times as long as the longitudinal diameter of each eye which is somewhat prominent laterally; surface coarsely and somewhat sparingly punctured on medio-frontal area, the punctures becoming much closer and finer in latero-basal areas. Antennae moderately long, extending to the middle of pronotum, two proximal segments polished and the remainings opaque, 1st segment robust and dilated apically, twice as long as wide, 2nd remarkably longer than wide (length/width = 1.75), distinctly shorter (2nd/1st = 0.59) and narrower (2nd/1st = 0.67) than 1st, 3rd elongate, twice as long as wide, a little longer (3rd/2nd = 1.14) than though as wide as 2nd, 4th to 6th equal in both length and width to one another, each 1.5 times as long as wide, somewhat shorter (each of 4th to 6th / 3rd = 0.75) than though as wide as 3rd, 7th a little longer than wide (length/width = 1.30), as long as though slightly wider than 6th (7th/6th = 1.15), 8th to 10th equal in both length and width, as long as though slightly wider than 7th (each of 8th to 10th / 7th = 1.09), 11th twice as long as wide, distinctly longer (11th/10th = 1.67) than though as wide as 10th, subacuminate at the apex.

Pronotum only slightly narrowed posteriorly and somewhat strongly convex than in head, distinctly longer than wide (length/width = 1.35), evidently longer (pronotum/head = 1.35) but slightly narrower (pronotum/head = 0.94) than head; lateral sides almost straight except near anterior and posterior angles, anterior margin arcuate, posterior margin subtruncate, anterior and posterior angles similar to those of the preceding species; surface densely and somewhat more coarsely punctured than in *P. flavipes* except for a narrow smooth median space throughout the length of pronotum. Elytra nearly oblong, longer than wide (length/width = 1.19), slightly shorter (elytra/pronotum = 0.96) but slightly wider (elytra/pronotum = 1.09) than pronotum; lateral sides only just slightly arcuate, posterior margin emarginate at the middle, posterior angles broadly rounded, surface densely covered with somewhat coarser punctures than those of pronotum; epipleuron provided with a fine longitudinal keel inside the outer margin. Hind wings degenerated to small lobes which are three-quarters as long as elytra. Legs similar in structure to those of the members of this species-group.

Abdomen elongate, nearly parallel-sided from 3rd to 7th segments, and then



Figs. 8–10. Male genital organ of *Platydomena iidesana* sp. nov.; dorsal view (8), lateral view (9), and ventral view (10). Scale: 0.5 mm.

abruptly narrowed apicad, 3rd to 7th tergites each shallowly and transversely depressed along the base; surface of each tergite closely, somewhat coarsely punctured and covered with fine brownish pubescence; 8th sternite subtriangularly excised at the middle of posterior margin and longitudinally depressed before the excision, surface of the depression asperate all over; 7th sternite shallowly emarginate at the middle of posterior margin and slightly, horse-shapedly depressed in front of the emargination, surface of the depression less punctured and pubescent than in other parts; 6th sternite simple.

Genital organ spindle-shaped and symmetrical. Median lobe somewhat narrower than fused paramere, gently rounded at the apex. Fused paramere obviously extending beyond median lobe and nearly rhomboidal, widest at the middle and more strongly narrowed apicad than basad, acutely pointed at the apex as seen from dorsal side; dorsal surface provided with a fine longitudinal carina in apical fourth; ventral surface also with a fine longitudinal carina at each side of the middle in apical half.

F e m a l e. Similar in general appearance to male, but the 8th abdominal sternite gradually narrowed towards the broadly rounded apex; 7th sternite simple.

Type series. Holotype: ♂, allotype: ♀, Ishikorobizawa on the Iide Mts., Yamagata Pref., Honshu, Japan, 27–VII–1964, Y. WATANABE leg. Paratypes: 1 ♂, 1 ♀, same locality and date as above, K. SASAKI leg.; 2 ♂♂, Nukumidaira on the Iide Mts., Yamagata Pref., Honshu, Japan, 26–VII–1964, K. TAKAHASHI leg.

Distribution. Japan (northeastern Honshu).

Bionomics. All the type specimens were obtained from under stones or by sifting dead leaves accumulated in deciduous broadleaved forests on the Iide Mts. at an altitude of 550 m (Nukumidaira) and 1,300 m (Ishikorobizawa).

Etymology. The specific epithet of the present new species is derived from the Iide Mountains, on which lie the two known localities.

要 約

渡辺泰明：本州北東部から採集されたドウガネナガハネカクシ種群（コウチュウ目ハネカクシ科）の3新種。—— 前報にて日本産ドウガネナガハネカクシ種群の4新種を記載したが、その後、本州東部の山地帯で採集された、この種群に含まれる個体を検討した結果、新たに3種が見出された。このうちの大菩薩嶺から得られた種は雄交尾器の形状からドウガネナガハネカクシに近縁の種とおもわれるが、外部形態や交尾器の形状に差異が認められ、未記載種と判断されたのでダイボサツドウガネナガハネカクシ *P. daibosatsuensis* と命名・記載した。一方、残りの飯豊山で採集された2種は、いずれも雄交尾器の形状がこれまでの既知種のものとは極端に異なっていて、これらも未記載種と判断されたのでキアシドウガネナガハネカクシ *P. flavipes* およびイイデドウガネナガハネカクシ *P. iidesana* とそれぞれ命名・記載した。

References

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